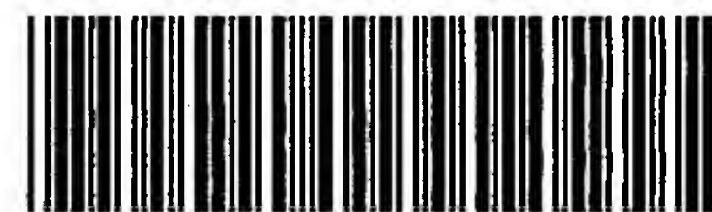


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The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/591,428A  
Source: FWP  
Date Processed by STIC: 4/16/07

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## RAW SEQUENCE LISTING

DATE: 04/16/2007

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TIME: 19:09:03

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3 <110> APPLICANT: Frohberg, Claus  
 4 Koetting, Oliver  
 5 Ritte, Gerhard  
 6 Steup, Martin  
 8 <120> TITLE OF INVENTION: Plants with increased activity of a starch phosphorylating  
 enzyme  
 10 <130> FILE REFERENCE: 65085.000021  
 12 <140> CURRENT APPLICATION NUMBER: 10/591,428A  
 13 <141> CURRENT FILING DATE: 2006-09-01  
 15 <150> PRIOR APPLICATION NUMBER: EP04090086.2  
 16 <151> PRIOR FILING DATE: 2004-03-05  
 18 <150> PRIOR APPLICATION NUMBER: EP04090121.7  
 19 <151> PRIOR FILING DATE: 2004-03-29  
 21 <150> PRIOR APPLICATION NUMBER: US 60/549,945  
 22 <151> PRIOR FILING DATE: 2004-03-05  
 24 <160> NUMBER OF SEQ ID NOS: 25  
 25 <170> SOFTWARE: PatentIn version 3.1  
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 43 Thr Arg Asn Ser Ser Ser Ser Leu Pro Arg Leu Val Asn Ile Thr His  
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 55 Lys Lys Lys Asp Gly Ser Gly Thr Lys Val Arg Leu Asn Val Arg Leu  
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| 63  | Lys | Glu | Ile | Gly | Ser | Trp | Lys | Lys | Lys | Ser | Pro | Leu | Asn | Trp | Ser | Glu |      |
| 64  |     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |      |
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| 67  | Asn | Gly | Trp | Val | Cys | Glu | Leu | Glu | Leu | Asp | Gly | Gly | Gln | Val | Leu | Glu |      |
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| 71  | Tyr | Lys | Phe | Val | Ile | Val | Lys | Asn | Asp | Gly | Ser | Leu | Ser | Trp | Glu | Ser |      |
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| 75  | Gly | Asp | Asn | Arg | Val | Leu | Lys | Val | Pro | Asn | Ser | Gly | Asn | Phe | Ser | Val |      |
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| 79  | Val | Cys | His | Trp | Asp | Ala | Thr | Arg | Glu | Thr | Leu | Asp | Leu | Pro | Gln | Glu |      |
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| 92  |     |     |     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |      |
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| 107 | Ile | Val | Gly | Ser | Val | Glu | Arg | Glu | Glu | Arg | Leu | Lys | Ala | Leu | Ile | Tyr |      |
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| 123 | Pro | Glu | Glu | Val | Leu | Val | Ala | Arg | Lys | Ile | His | Pro | Cys | Leu | Pro | Ser |      |
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| 131 | Ile | Ala | His | Arg | Asn | Asp | Ile | Pro | His | Asp | Leu | Lys | Gln | Glu | Ile | Lys |      |
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| 135 | His | Thr | Ile | Gln | Asn | Lys | Leu | His | Arg | Asn | Ala | Gly | Pro | Glu | Asp | Leu |      |
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| 139 | Ile | Ala | Thr | Glu | Ala | Met | Leu | Gln | Arg | Ile | Thr | Glu | Thr | Pro | Gly | Lys |      |
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| 142 | tat | agt | gga | gac | ttt | gtg | gag | cag | ttt | aaa | ata | ttc | cat | aat | gag | ctt | 1296 |
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| 151 | Lys | Ile | Ser | Met | Asp | Asp | Arg | Gly | Leu | Ser | Ala | Leu | Asn | Leu | Phe | Phe |      |
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| 155 | Glu | Cys | Lys | Lys | Arg | Leu | Asp | Thr | Ser | Gly | Glu | Ser | Ser | Asn | Val | Leu |      |
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| 159 | Glu | Leu | Ile | Lys | Thr | Met | His | Ser | Leu | Ala | Ser | Leu | Arg | Glu | Thr | Ile |      |
| 160 |     |     |     | 485 |     |     |     | 490 |     |     |     | 495 |     |     |     |     |      |
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| 179 | Ser | Trp | Asn | Asp | Pro | Leu | Asp | Ala | Leu | Val | Leu | Gly | Val | His | Gln | Val |      |
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| 183 | Gly | Leu | Ser | Gly | Trp | Lys | Gln | Glu | Glu | Cys | Leu | Ala | Ile | Gly | Asn | Glu |      |
| 184 |     |     | 580 |     |     |     | 585 |     |     |     |     | 590 |     |     |     |     |      |
| 186 | ctc | ctt | gct | tgg | cga | gaa | agg | gac | cta | ctt | gaa | aaa | gaa | ggg | gaa | gag | 1824 |
| 187 | Leu | Leu | Ala | Trp | Arg | Glu | Arg | Asp | Leu | Leu | Glu | Lys | Glu | Gly | Glu | Glu |      |
| 188 |     |     | 595 |     |     |     | 600 |     |     |     |     | 605 |     |     |     |     |      |
| 190 | gat | gga | aaa | aca | att | tgg | gcc | atg | agg | ctg | aaa | gca | act | ctt | gat | cga | 1872 |
| 191 | Asp | Gly | Lys | Thr | Ile | Trp | Ala | Met | Arg | Leu | Lys | Ala | Thr | Leu | Asp | Arg |      |

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| 196 | 625 630 635 640   |      |     |  |
| 198 | cct cct aat gtg gag att tta gga aaa gct cta gga att cca gag aat | 1968 |     |  |
| 199 | Pro Pro Asn Val Glu Ile Leu Gly Lys Ala Leu Gly Ile Pro Glu Asn |      |     |  |
| 200 | 645 650 655   |      |     |  |
| 202 | agt gtc aag acc tat aca gaa gca gag att cgt gct gga att att ttc | 2016 |     |  |
| 203 | Ser Val Lys Thr Tyr Thr Glu Ala Glu Ile Arg Ala Gly Ile Ile Phe |      |     |  |
| 204 | 660 665 670   |      |     |  |
| 206 | cag atc tca aag ctc tgc act gtt ctt cta aaa gct gta aga aat tca | 2064 |     |  |
| 207 | Gln Ile Ser Lys Leu Cys Thr Val Leu Leu Lys Ala Val Arg Asn Ser |      |     |  |
| 208 | 675 680 685   |      |     |  |
| 210 | ctt ggt tct gag ggc tgg gat gtc gtt gta cct gga tcg acg tct ggg | 2112 |     |  |
| 211 | Leu Gly Ser Glu Gly Trp Asp Val Val Val Pro Gly Ser Thr Ser Gly |      |     |  |
| 212 | 690 695 700   |      |     |  |
| 214 | aca tta gtt cag gtt gag agc att gtt ccg gga tca ttg cca gca act | 2160 |     |  |
| 215 | Thr Leu Val Gln Val Glu Ser Ile Val Pro Gly Ser Leu Pro Ala Thr |      |     |  |
| 216 | 705 710 715 720   |      |     |  |
| 218 | tct ggt ggt cct att att ctc ttg gtc aat aaa gct gat ggc gat gaa | 2208 |     |  |
| 219 | Ser Gly Gly Pro Ile Ile Leu Leu Val Asn Lys Ala Asp Gly Asp Glu |      |     |  |
| 220 | 725 730 735   |      |     |  |
| 222 | gag gta agt gct gct aat ggg aac ata gct gga gtc atg ctt ctg cag | 2256 |     |  |
| 223 | Glu Val Ser Ala Ala Asn Gly Asn Ile Ala Gly Val Met Leu Leu Gln |      |     |  |
| 224 | 740 745 750   |      |     |  |
| 226 | gag ctg cct cac ttg tct cac ctt ggc gtt aga gcg cgg cag gag aaa | 2304 |     |  |
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| 228 | 755 760 765   |      |     |  |
| 230 | att gtc ttt gtg aca tgt gat gat gat gac aag gtt gct gat ata cga | 2352 |     |  |
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| 232 | 770 775 780   |      |     |  |
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| 239 | Asn Leu Ile Leu Ser Thr Glu Gly Arg Ser Arg Thr Ser Lys Ser Ser |      |     |  |
| 240 | 805 810 815   |      |     |  |
| 242 | gcg acc aaa aaa acg gat aag aac agc tta tct aag aaa aaa aca gat | 2496 |     |  |
| 243 | Ala Thr Lys Lys Thr Asp Lys Asn Ser Leu Ser Lys Lys Lys Thr Asp |      |     |  |
| 244 | 820 825 830   |      |     |  |
| 246 | aag aag agc tta tct atc gat gat gaa gaa tca aag cct ggt tcc tca | 2544 |     |  |
| 247 | Lys Lys Ser Leu Ser Ile Asp Asp Glu Glu Ser Lys Pro Gly Ser Ser |      |     |  |
| 248 | 835 840 845   |      |     |  |
| 250 | tct tcc aat agc ctc ctt tac tct tcc aag gat atc cct agt gga gga | 2592 |     |  |
| 251 | Ser Ser Asn Ser Leu Leu Tyr Ser Ser Lys Asp Ile Pro Ser Gly Gly |      |     |  |
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| 260 | 885 890 895   |      |
| 262 | cac agc gaa cac gga gtt ccg gca tca ttt aag gtt cca act gga gtt | 2736 |
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| 264 | 900 905 910   |      |
| 266 | gtc ata cct ttt gga tcg atg gaa tta gct tta aag caa aat aat tcg | 2784 |
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| 268 | 915 920 925   |      |
| 270 | gaa gaa aag ttt gcg tct ttg cta gaa aaa cta gaa acc gcc aga cct | 2832 |
| 271 | Glu Glu Lys Phe Ala Ser Leu Leu Glu Lys Leu Glu Thr Ala Arg Pro |      |
| 272 | 930 935 940   |      |
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| 275 | Glu Gly Gly Glu Leu Asp Asp Ile Cys Asp Gln Ile His Glu Val Met |      |
| 276 | 945 950 955 960   |      |
| 278 | aaa acg ttg caa gtg cct aaa gaa aca atc aac agc ata agc aaa gcg | 2928 |
| 279 | Lys Thr Leu Gln Val Pro Lys Glu Thr Ile Asn Ser Ile Ser Lys Ala |      |
| 280 | 965 970 975   |      |
| 282 | ttt ctc aaa gat gct cgt ctc att gtt cgt tca agt gct aac gtc gag | 2976 |
| 283 | Phe Leu Lys Asp Ala Arg Leu Ile Val Arg Ser Ser Ala Asn Val Glu |      |
| 284 | 980 985 990   |      |
| 286 | gac tta gcc gga atg tca gct gca gga ctc tat gaa tca atc cct aac | 3024 |
| 287 | Asp Leu Ala Gly Met Ser Ala Ala Gly Leu Tyr Glu Ser Ile Pro Asn |      |
| 288 | 995 1000 1005   |      |
| 290 | gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa     | 3069 |
| 291 | Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln     |      |
| 292 | 1010 1015 1020  |      |
| 294 | gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga     | 3114 |
| 295 | Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg     |      |
| 296 | 1025 1030 1035  |      |
| 298 | gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt     | 3159 |
| 299 | Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val     |      |
| 300 | 1040 1045 1050  |      |
| 302 | caa gaa atg ctt tcg ccg gac tta tca ttc gtt ctg cac aca gtg     | 3204 |
| 303 | Gln Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val     |      |
| 304 | 1055 1060 1065  |      |
| 306 | agt cca gct gat ccg gac agt aac ctt gtg gaa gcc gag atc gct     | 3249 |
| 307 | Ser Pro Ala Asp Pro Asp Ser Asn Leu Val Glu Ala Glu Ile Ala     |      |
| 308 | 1070 1075 1080  |      |
| 310 | cct ggt tta ggt gag act tta gct tca gga aca aga gga aca cca     | 3294 |
| 311 | Pro Gly Leu Gly Glu Thr Leu Ala Ser Gly Thr Arg Gly Thr Pro     |      |
| 312 | 1085 1090 1095  |      |
| 314 | tgg aga ctc gct tcg ggt aag ctc gac ggg att gta caa acc tta     | 3339 |
| 315 | Trp Arg Leu Ala Ser Gly Lys Leu Asp Gly Ile Val Gln Thr Leu     |      |
| 316 | 1100 1105 1110  |      |
| 318 | gct ttc gca aac ttc agc gaa gag ctt ctt gtg tca gga aca ggt     | 3384 |
| 319 | Ala Phe Ala Asn Phe Ser Glu Glu Leu Leu Val Ser Gly Thr Gly     |      |
| 320 | 1115 1120 1125  |      |
| 322 | cct gct gat gga aaa tac gtt cgg ttg acc gtg gac tat agc aaa     | 3429 |

VERIFICATION SUMMARY

DATE: 04/16/2007

PATENT APPLICATION: US/10/591,428A

TIME: 19:09:04

Input Set : E:\SEQUENCE LISTING PCT.EP.2005.002449 (65084.21).txt

Output Set: N:\CRF4\04162007\J591428A.raw

L:37 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:35

L:664 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:3,Line#:662